IN THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A method, comprising:

quantizing, according to a connection time between the transmitter and a receiver, ~~at least one of~~ a channel response function of a signal received from a transmitter or a residual value of the channel response function, wherein a channel estimate is subtracted from the channel response function to provide the residual value; and

generating a channel state information packet to be transmitted back to the transmitter, wherein the packet selectively includes, according to the connection time, ~~either~~ the quantized channel response function or the quantized residual value of the channel response function ~~according to a connection time between the transmitter and a receiver~~, and wherein the channel state information permits the transmitter to obtain a channel state estimation.

2. (Previously Presented) The method as claimed in claim 1, further comprising, where the channel response function is represented by M complex numbers, limiting the channel response function to N complex numbers where N is less than M.

3. (Previously Presented) The method as claimed in claim 1, further comprising converting the signal from a frequency domain representation of the signal to a time domain representation of the signal prior to said quantizing.

4. (Previously Presented) The method as claimed in claim 1, further comprising converting the signal from at least one of a frequency domain representation or a time domain representation to power allocation and modulation type instructions prior to said quantizing.

5. (Previously Presented) The method as claimed in claim 1, further comprising converting the signal from a frequency domain representation of the signal to a time domain

representation of the signal prior to said quantizing, and where the channel response function is represented by M complex numbers, limiting the channel response function to N complex numbers where N is less than M, wherein the N complex numbers are limited to values having time delays less than a predetermined delay spread.

6. (Previously Presented) The method as claimed in claim 1, wherein the channel state information packet includes the quantized channel response function when at least one of the channel state information packet is a first feedback packet, or there is an interruption in the connection.

7. (Previously Presented) The method as claimed in claim 1, further comprising converting the signal from a frequency domain representation of the signal to a time domain representation of the signal prior and then calculating a channel response function on the signal prior to said quantizing, wherein said calculating includes said subtracting a channel estimate from the channel response function to provide a residual value of the channel response function.

8. (Previously Presented) The method as claimed in claim 1, wherein said quantizing includes estimating a time delay attenuation of the channel response function.

9. (Currently Amended) An article comprising:

a storage medium having stored thereon instructions that, when executed by a computing platform, result in the encoding of a channel state information packet by:

quantizing, according to a connection time between the transmitter and a receiver, ~~at least one of~~ a channel response function of a signal received from a transmitter or a residual value of the channel response function, wherein a channel estimate is subtracted from the channel response function to provide the residual value; and

generating a channel state information packet to be transmitted back to the transmitter, wherein the packet selectively includes, according to the connection time, ~~either~~ the quantized channel response function or the quantized residual value of the channel response function

~~according to a connection time between the transmitter and a receiver~~, and wherein the channel state information permits the transmitter to obtain a channel state estimation.

10. (Previously Presented) The article as claimed in claim 9, wherein the instructions, when executed, further result in the encoding of a channel state information packet by, where the channel response function is represented by M complex numbers, limiting the channel response function to N complex numbers where N is less than M.

11. (Previously Presented) The article as claimed in claim 9, wherein the instructions, when executed, further result in the encoding of a channel state information packet by converting the signal from a frequency domain representation of the signal to a time domain representation of the signal prior to said quantizing.

12. (Previously Presented) The article as claimed in claim 9, wherein the instructions, when executed, further result in the encoding of a channel state information packet by converting the signal from at least one of a frequency domain representation or a time domain representation to power allocation and modulation type instructions prior to said quantizing.

13. (Previously Presented) The article as claimed in claim 9, wherein the instructions, when executed, further result in the encoding of a channel state information packet by converting the signal from a frequency domain representation of the signal to a time domain representation of the signal prior to said quantizing, and where the channel response function is represented by M complex numbers, limiting the channel response function to N complex numbers where N is less than M, wherein the N complex numbers are limited to values having time delays less than a predetermined delay spread.

14. (Previously Presented) The article as claimed in claim 9, wherein the instructions, when executed, further result in the encoding of the channel state information packet by calculating the channel response function on the signal prior to said quantizing, wherein said

calculating includes said subtracting a channel estimate from the channel response function to provide a residual value of the channel response function wherein the channel state information packet includes the quantized channel response function when at least one of the channel state information packet is a first feedback packet, or there is an interruption in the connection.

15. (Previously Presented) The article as claimed in claim 9, wherein the instructions, when executed, further result in the encoding of a channel state information packet by converting the signal from a frequency domain representation of the signal to a time domain representation of the signal prior and then calculating a channel response function on the signal prior to said quantizing.

16. (Previously Presented) The article as claimed in claim 9, wherein said quantizing includes estimating a time delay attenuation of the channel response function.

17. (Currently Amended) A method, comprising:

parsing a channel state information packet received from a device after transmitting a signal to the device to obtain a quantized channel response function of the signal wherein the channel state information packet selectively includes, depending on a connection time with the device, ~~either~~ the quantized channel response function or a quantized residual value of the channel response function ~~depending on a connection time with the device~~; and

dequantizing the quantized channel response function to provide a channel response function.

18. (Previously Presented) The method as claimed in claim 17, wherein the channel response function is an estimate of the channel response function, wherein the estimate of the channel response function is represented by N complex numbers, wherein the channel response function is represented by M complex numbers, and wherein N is less than M.

19. (Previously Presented) The method as claimed in claim 17, further comprising, calculating an updated estimate of the channel response function by adding a current estimate of the channel response function to the residual of the channel response function when the channel response function of the channel state information packet is represented as a residual of the channel response function.

20. (Previously Presented) The method as claimed in claim 17, further comprising, where the channel response function is a time domain representation, converting the time domain representation of the channel response function to a frequency domain representation of the channel response function.

21. (Currently Amended) An article, comprising:

a storage medium having stored thereon instructions that, when executed by a computing platform, result in the decoding of a channel state information packet by:

parsing a channel state information packet received from a device after transmitting a signal to the device to obtain a quantized channel response function of the signal wherein the channel state information packet selectively includes, depending on a connection time with the device, ~~either~~ the quantized channel response function or a quantized residual value of the channel response function ~~depending on a connection time with the device~~; and

dequantizing the quantized channel response function to provide a channel response function.

22. (Previously Presented) The article as claimed in claim 21, wherein the channel response function is an estimate of the channel response function, wherein the estimate of the channel response function is represented by N complex numbers, wherein the channel response function is represented by M complex numbers, and wherein N is less than M.

23. (Previously Presented) The article as claimed in claim 21, wherein the instructions, when executed, further result in the decoding of a channel state information packet by

calculating an updated estimate of the channel response function by adding a current estimate of the channel response function to the residual of the channel response function when the channel response function of the channel state information packet is represented as a residual of the channel response function.

24. (Previously Presented) The article as claimed in claim 21, wherein the instructions, when executed, further result in the decoding of a channel state information packet by, where the channel response function is a time domain representation, converting the time domain representation of the channel response function to a frequency domain representation of the channel response function.

25. (Currently Amended) An apparatus, comprising:

a baseband processor; and

a transceiver to couple to said baseband processor and an omnidirectional antennal;

wherein said baseband processor quantizes, according to a connection time between the transmitter and a receiver, ~~at least one of~~ a channel response function of a signal received from a transmitter via said transceiver or a residual value of the channel response function, wherein a channel estimate is subtracted from the channel response function to provide the residual value and generates a channel state information packet to be transmitted back to the transmitter wherein the packet selectively includes, according to the connection time, ~~either~~ the quantized channel response function or the quantized residual value of the channel response function ~~according to a connection time between the transmitter and a receiver~~.

26. (Previously Presented) The apparatus as claimed in claim 25, wherein said baseband processor, where the channel response function is represented by M complex numbers, limits the channel response function to N complex numbers where N is less than M.

27. (Previously Presented) The apparatus as claimed in claim 25, wherein said baseband processor converts the signal from a frequency domain representation of the signal to a time domain representation of the signal prior to quantizing the channel response function.

28. (Previously Presented) The apparatus as claimed in claim 25, wherein said baseband processor converts the signal from a frequency domain representation of the signal to a time domain representation of the signal prior to quantizing the channel response function, and, where the channel response function is represented by M complex numbers, limits the channel response function to N complex numbers where N is less than M wherein the N complex numbers are limited to values having time delays less than a predetermined delay spread.

29. (Previously Presented) The apparatus as claimed in claim 25, wherein said baseband processor calculates a channel response function on the signal prior to quantizing the channel response function or the residual value of the channel response function, and wherein the packet includes a quantized residual value of the channel response function when at least one of the channel state information packet is a first feedback packet, or there is an interruption in the connection.

30. (Previously Presented) The apparatus as claimed in claim 25, wherein said baseband processor converts the signal from a frequency domain representation of the signal to a time domain representation of the signal prior and then calculates a channel response function on the signal prior to quantizing the channel response function, by said subtracting a channel estimate from the channel response function to provide a residual value of the channel response function.

31. (Currently Amended) An apparatus, comprising:

a baseband processor; and

a transceiver to couple to said baseband processor and an omnidirectional antennal;

wherein said baseband processor parses a channel state information packet received from a device after transmitting a signal to the device to obtain a quantized channel response function of the signal to obtain a quantized channel response function of the signal wherein the channel state information packet selectively includes, depending on a connection time with the device, ~~either~~ the quantized channel response function or a quantized residual value of the channel response function ~~depending on a connection time with the device~~, and dequantizes the quantized channel response function to provide a channel response function.

32. (Previously Presented) The apparatus as claimed in claim 31, wherein the channel response function is an estimate of the channel response function, wherein the estimate of the channel response function is represented by N complex numbers, wherein the channel response function is represented by M complex numbers, and wherein N is less than M.

33. (Previously Presented) The apparatus as claimed in claim 31, wherein said baseband processor calculates an updated estimate of the channel response function by adding a current estimate of the channel response function to the residual of the channel response function when the channel response function of the channel state information packet is represented as a residual of the channel response function.

34. (Previously Presented) The apparatus as claimed in claim 31, wherein said baseband processor, where the channel response function is a time domain representation, converts the time domain representation of the channel response function to a frequency domain representation of the channel response function.